

**IN THE CLAIMS:**

1. (Currently Amended) A method for forming semiconductor film single-crystal domains, the method comprising:  
forming a substrate;  
forming a single-crystal seed overlying the substrate,  
selected from the group including a nanowire and a self assembled monolayer (SAM);  
forming an amorphous film overlying the seed;  
annealing the amorphous film; and,  
forming a single-crystal domain in the film responsive to the single-crystal seed.
2. (Original) The method of claim 1 wherein forming an amorphous film overlying the seed includes forming a film from a material selected from the group including silicon and silicon-germanium.
3. (Original) The method of claim 2 wherein annealing the amorphous film includes annealing with a process selected from the group including laser annealing, laser induced lateral growth (LiLAC), and furnace annealing.
4. (Original) The method of claim 3 wherein forming a substrate includes forming a substrate from a material selected from the group including glass, plastic, metal, and silicon.

5. (Original) The method of claim 4 further comprising prior to forming the single-crystal seed, forming an insulator film overlying the substrate.

6. (Original) The method of claim 5 wherein forming an insulator film overlying the substrate includes forming the insulator layer from a material selected from the group including SiO<sub>2</sub>, SiN<sub>x</sub>, and combinations of SiO<sub>2</sub> and SiN<sub>x</sub>.

7. Canceled

<sup>10</sup>8. (Currently Amended) The method of claim [[7]] 1 wherein forming a single-crystal seed includes forming a single-crystal seed having a crystallographic orientation selected from the group including <110> and <100>.

<sup>7</sup>9. (Original) The method of claim 6 wherein forming a single-crystal seed includes forming a nanowire having a diameter in the range of 2 to 50 nanometers and a length in the range of 10 to 1000 microns.

<sup>11</sup>  
<sup>10</sup>10. (Currently Amended) The method of claim [[7]] 1 wherein forming a single-crystal seed includes forming a plurality of seeds overlying the substrate; and,  
wherein forming a single-crystal domain in the film responsive to the seed includes forming a plurality of single-crystal domains, each domain responsive to a corresponding seed.

<sup>8</sup>  
11. (Original) The method of claim 6 wherein annealing the amorphous film includes annealing using the LiLAC process with a beamlet width less than 20 microns.

<sup>9</sup>  
12. (Original) The method of claim <sup>8</sup>11 wherein annealing the amorphous film includes annealing using the LiLAC process with a beamlet width less than 10 microns.

13. (Currently Amended) The method of claim [[7]] 1 wherein forming a single-crystal seed includes forming a nanowire with a first length; and,

wherein annealing the amorphous film includes annealing using the LiLAC process with a beamlet length greater than the first length.

14. (Currently Amended) The method of claim [[7]] 1 wherein forming a single-crystal seed includes forming a plurality of single-crystal seeds; and,

wherein annealing the amorphous film includes annealing using the LiLAC process with a beamlet length sufficient to simultaneously irradiate a plurality of seeds.

15. (Currently Amended) The method of claim [[7]] 1 wherein annealing the amorphous film using the LiLAC process includes step-and-repeat annealing in a first direction; and,

wherein forming a single-crystal domain in the film includes forming a single-crystal domain laterally grown in the first direction, having a length of greater than 50 microns.

16. (Original) The method of claim 15 wherein forming a single-crystal domain in the film includes forming a single-crystal domain laterally grown in the first direction, having a length of greater than 100 microns.

17. (Currently Amended) The method of claim [[7]] 1 wherein forming a single-crystal seed overlying the substrate includes depositing the single-crystal seed overlying a selected area of the substrate.

18. (Original) The method of claim 17 wherein depositing the single-crystal seed overlying a selected area of the substrate includes:

- depositing a plurality of seeds overlying the substrate;
- forming a mask over the selected area of the substrate; and,
- etching the seeds from the unmasked areas.

<sup>20</sup>  
19. (Currently Amended) The method of claim [[7]] 1 wherein forming a single-crystal seed includes depositing a plurality of single-crystal seeds overlying the substrate, including a first seed, overlying a first area of the substrate; and,

wherein forming a single-crystal domain includes:

forming the single-crystal domain in response to  
annealing the first seed; and,  
recrystallizing the plurality of seeds in the  
crystallographic orientation of the first seed.

<sup>19</sup>  
20. (Original) The method of claim 17 wherein forming  
a single-crystal seed overlying the substrate includes depositing a  
nanowire having a length in a first direction with respect to the  
underlying substrate.

<sup>12</sup>  
21. (Original) The method of claim <sup>11</sup>10 wherein forming  
an amorphous film overlying the seed includes forming an amorphous Si  
film; and,

the method further comprising:

forming a plurality of pixel areas, each pixel area  
corresponding to the plurality of single-crystal domains.

<sup>21</sup>  
22. (Currently Amended) The method of claim [[7]] 1  
wherein forming an amorphous film overlying the seed includes forming  
an amorphous Si film; and,

the method further comprising:

forming a liquid crystal display (LCD) pixel area in the  
single-crystal domain.

<sup>22</sup>  
23. (Currently Amended) The method of claim [[7]] 1  
wherein forming an amorphous film overlying the seed includes forming  
an amorphous Si film; and,

the method further comprising:  
forming thin-film transistors (TFTs) in the single-crystal domain.

<sup>23</sup>  
~~24~~. (Original) The method of claim <sup>22</sup>~~23~~ wherein forming a single-crystal seed includes forming a seed with a <100> crystallographic orientation; and,  
wherein forming TFTs in the single-crystal domain includes forming an n-type TFT.

<sup>24</sup>  
~~25~~. (Original) The method of claim <sup>22</sup>~~23~~ wherein forming a single-crystal seed includes forming a seed with a <110> crystallographic orientation; and,  
wherein forming TFTs in the single-crystal domain includes forming a p-type TFT.

26-50. Canceled